DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY
5000 OVERLOOK AVENUE, S.W., WASHINGTON, D.C. 20032

June 7, 2005

Ms. Karen Johnson, Chief
Safe Drinking Water Act Branch
United States Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

RE: Administrative Order, Paragraph #63
Plan for Update of Materials Evaluation and Lead Service Inventory
Third Quarterly Status Report

The Administrative Order for Compliance on Consent (Docket No. SDWA-03-2004-029DS), paragraph 63, requires quarterly progress reports regarding the activities undertaken by WASA to implement the plan in compliance with this paragraph. The following constitutes the third quarterly status report. As you are aware, the plan was approved by EPA by letter dated September 29, 2004.

For convenience, we are repeating or paraphrasing the elements of the approved plan below and are then providing a brief status report on each activity, shown in **bold type**.

1. Establish a baseline inventory of the estimated number of lead service lines in the DCWASA distribution system as of June 30, 2001 (June '01 Baseline Inventory)

   Status: Baseline inventory completed and submitted to EPA by letter dated September 1, 2004.

2. Initially update the June '01 Baseline Inventory and submit to EPA by September 1, 2004. Update June '01 Baseline Inventory each September 1 thereafter by adding service lines that are identified by subsequent efforts to be lead and subtracting service lines that subsequently are identified as copper or brass. Based on the updates to the June '01 Baseline Inventory, recalculate the number of lead service lines to be replaced by September 30, 2004 and every September 30 thereafter.

   Status: Initial update of inventory completed and submitted to EPA by letter dated September 1, 2004.

3. Inventory Update

a) DCWASA proposed as follows:

i. Field determination of the materials of construction for 1,200 service lines currently listed as "unknown" will be undertaken during the 2005 replacement period (i.e. October 1, 2004 through September 30, 2005).

Furthermore, by letter dated September 7, 2004 WASA supplemented this proposed approach. In this letter WASA explained that it intends to use this no-dig method to determine the material of the 1,200 selected addresses. However, WASA plans to also test pit the first 100 no-dig determinations.

Status: **WASA has concluded the concurrent no-dig and test pit material determination for 100 sites. The results did not conclusively demonstrate the accuracy of the no-dig technology. Therefore, WASA has proceeded to have all sites physically test pitted. Physical test pits will be utilized until such time as no-dig technology can be conclusively demonstrated. To date, 732 test pits have been completed and all 1200 test pits will be complete by July 8, 2005.**

ii. DCWASA will replace 2,500 lead service lines during FY '05. **[WASA's current goal is replace up to 2800 services.]** Experience has shown that it will be necessary to test pit approximately 3,750 **[4200 with increased goal]** services in order locate 2,500 **[2800]** lead services. Thus material information on these 3,750 **[4200]** service lines will also be entered into the CIS. The service material information will also provide data that can be used to assess other unknown services as described below.

iii. DCWASA data from the FY'03 and FY'04 replacement programs will be entered into the CIS. WASA has replaced, or will replace 2,200 lead service lines. **[As reported, WASA replaced 385 services in 2003 and 1,793 were replaced in 2004 for a total of 2178.]** In implementing this program, WASA has dug, or will dig approximately 3,300 test pits to verify the 2,200 **[2178]** lead service lines. This information will be entered into CIS and will be used to update our inventory. It will also be used to assess other unknown services as described below.

iv. Using the 1,200 unknown material determinations, 3,750 **[4200]** material determination from the 2005 program, and over 3,300 material determinations from the 2003 and 2004 programs, WASA will:

- Assess to what extent date of service is an accurate determiner of material

- Assess to what extent water test results (second draw) is an accurate determiner of material and to determine test level (concentration in ppb) that is the threshold indicator.
- Assess to what extent size of service is an accurate determiner of material

v. WASA will analyze the data collected from these over 8,000 material determinations versus the potential positive determiners; water test results, age and size. Statistical correlations will be done using this data by August 1, 2005. Also by September 1, 2005 WASA will submit a plan to EPA to resolve the remaining unknown services not actually physically determined to that date.

Status: **Construction is progressing on the 2005 replacement program and data is being gathered regarding the material of the services during this program. All data compiled for replacement years 2003, 2004 and 2005 to the time of analysis will be combined with the 2005 program. To date 7660 test pits have been accomplished. These results will be combined with the results from the 1200 direct determinations of unknowns. Analysis of this data is already underway to be concluded during July 2005 with preliminary findings of the statistical analysis ready by August 1, 2005. By September 1, 2005 WASA will submit a plan to EPA to resolve the remaining unknown services.**

b) DCWASA will use its Customer Information System (CIS) database to evaluate services presently listed as "unknown". As mentioned above, significant programming changes are necessary to accomplish this CIS modification and they will not be completed until December 1, 2004. The fields in this inventory are being expanded to facilitate the delineation of the materials of construction with respect to both the public and private sections of the service lines. In addition to the material information describe above, all verifiable information derived from other sources such as plumbers and from the District Department of Transportation road projects will be entered into the database. A schematic of this process is attached.

Status: **CIS was modified and successfully tested. Data entry began on December 1, 2004 per our schedule. WASA had entered all data as scheduled as of March 1, 2005.**

4. Materials Evaluation Used for Sampling

The Lead/Copper Rule requires 100 samples every six months. WASA has submitted its Lead and Copper Site Selection Criteria for 6-month Monitoring

Periods that outlines rationale used for selection as well as the addresses selected for routine sampling. The material of the services for each address is listed in Appendix C, Table 2 of the statement of criteria previously submitted to EPA. The material determination is derived from WASA's current inventory of service material. WASA's plan for evaluating the material of the service for its routine monitoring is as follows:

a) For each address of the current list of addresses for routine monitoring WASA will positively determine the material of the service from the main to the property line, and from the property line to the residence using either no-dig technology or test pits, or a combination.

b) WASA will report the results to EPA by January 1, 2005.

c) WASA will make any needed modifications to its site selection for routine monitoring based on the January report and will submit these for EPA approval as required by the regulations.

Status: **During subsequent discussions with you and your staff, EPA directed that only the service lines of the routine sampling addresses that are "unknown" need be positively determined as to material. There are 23 service lines that are unknown in our inventory. Five of these have been test pitted to date and the remainder will be complete by July 8, 2005. We plan to include a report on the materials of the routine service line sampling addresses as part of the August 1, 2005 report.**

Sincerely,

John T. Dunn
Chief Engineer/Deputy General Manager